

Application No.: 10/758,716
Docket No.: AD6950 USNA

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REMARKS

I. Status of the claims

Claims 1-8 are pending in the present application. Claims 2-4 are withdrawn from consideration. By an Office Action dated November 26, 2007 the Examiner acknowledged the addition of Claims 5-8 by amendment, wherein the Examiner deemed claims 5-8 as being directed to a non-elected invention. The Examiner stated only claim 1 was under examination.

Claim 1 has been rejected, and is now amended. Claims 9 and 10, which depend from amended claim 1, are added herewith.

Request for Continued Examination under 37 C.F.R. 1.114 and entry of the amendment submitted herewith is requested.

II. Support for amendments to claim 1

Referring to the published specification in the instant case, bases for amendments to claim 1 are as follows:

In claim 1, the particle size of 1000 mm or less" is present at paragraph 0023.

In claim 1, the limitation of "applying a pressure of about 700 kPa to about 3.5 MPa while heating said mold or molding device to a temperature of at least 20°C above the melting point of said thermotropic liquid crystalline polymer" is at paragraph 0024.

In claim 1, the limitation of "increasing the applied pressure by at least a factor of 10 upon reaching said temperature of at least 20°C above the melting point of said thermotropic liquid crystalline polymer" is present in Examples 1 and 2 (in which the pressure is increased from 2.6 MPa to 35.1 MPa).

In claim 1, the limitation of "maintaining said pressure and temperature for a time sufficient to melt the thermotropic liquid crystalline polymer throughout the composition being molded and to allow densification to take place" is present at paragraph 0024.

In claim 1, the limitation of "apparent density as measured by the procedure of ASTM D792 of at least about 75% of the calculated density" is present at paragraph 0025.

III. Support for newly added claims 9 and 10

Bases for newly claims 9 and 10 are present in the published specification, at paragraph [0025].

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IV. Traversal of the rejection

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (US 6,024,126) in view of Koshal (Manufacturing Engineers Reference Book, 1993) and Baird et al. (Polymer Processing, 1995). Applicants traverse the rejection.

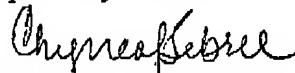
As amended, claim 1 is non-obvious over the primary reference, Miller et al. Miller et al., like Koshal and Baird, are silent regarding (i) isotropic parts and (ii) density of the parts produced, or (iii) any of the molding conditions necessary to form an isotropic thermotropic liquid crystalline part, as-claimed. The Examiner admits that Miller does not disclose "specific conditions regarding the compression molding process nor the degree of flow/shear in the process." Applicants agree that Miller is deficient of such disclosure. None of the references, either singly or in combination, disclose each and every element of Applicants' claimed invention, lacking the limitations on the conditions used in the claimed process.

Furthermore, Koshal and Baird et al. fail to cure the deficient disclosure, and there is no basis in the combined references to make out a prima facie case of obviousness under 35 U.S.C. 103(a). The Examiner discloses that Koshal discloses that compression molding consists of heating a polymer, including powder forms, to its melting point and forming the product under pressure. The product and mold are ultimately cooled. Nothing in Koshal suggests the specific limitations of Applicants' invention as recited in amended claim 1. Likewise, Baird et al. only discloses that compression molding typically involves very little flow. Nothing in Millet et al., Koshal or Baird et al. disclose heating while applying pressure, nor the increase of pressure as recited in Applicants' compression molding process for forming an isotropic, thermotropic liquid crystalline part. The prima facie case of obviousness has not been made. Withdrawal of the rejection is proper.

CONCLUSION

In view of the foregoing remarks, Applicants request reconsideration and allowance of all rejected and pending claims.

Respectfully submitted,


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